

II. REMARKS

Claims 1 and 3-18 are pending. Claims 1, 6, 7, and 17 are amended, claim 2 is canceled, and claim 18 is added. The amendments are supported by the specification and the originally filed claims. For example, the amendments to claim 1 are supported by the specification and originally filed claim 1. The amendments to claim 6 are supported, for example, by originally filed claims 1, 4, and 6, the first paragraph on page 2 of the specification, the paragraph bridging pages 3 and 4 of the specification, the paragraph bridging pages 5 and 6 of the specification, and Example 9 on pages 17-18 of the specification, where layer A) is a blend of copolymer E/CTFE with the copolymer E/CTFE/n-BuA. Claim 16 is amended to depend from a pending claim and claim 17 is amended for clarification, as suggested by the Examiner. Meanwhile, claim 18 is supported, for example, by originally filed claims 1, 2, and 4. No new matter is added.

Entry of this Amendment is proper under 37 C.F.R. § 1.116 since this Amendment: (a) places the application in condition for allowance for reasons discussed herein; (b) does not raise any new issue regarding further search and/or consideration since the Amendment amplifies issues previously discussed throughout prosecution; (c) does not present any additional claims without canceling a corresponding number of finally-rejected claims and (d) places the application in better form for appeal, should an appeal be necessary. Entry of the Amendment is thus respectfully requested.

Applicants thank the Examiner for again indicating that claims 4 and 5 would be allowable if rewritten in independent form. Applicants respectfully submit that present claims 6, 7, 16, and 18 are allowable for at least the same reasons as claim 4.

Claim 17 is rejected under 35 U.S.C. § 112, second paragraph, for the asserted indefiniteness. Applicants respectfully submit that this rejection has been overcome by the above amendments to claim 17. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 17 under 35 U.S.C. § 112, second paragraph.

Claims 1-3, 6-9, and 11-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Abusleme et al. (EP 1,038,914) in view of Stoeppelmann (U.S. Patent No. 5,869,157). This rejection is respectfully traversed.

Please see the previously filed remarks distinguishing Abusleme et al. and Stoeppelmann. As noted by the Examiner, paragraph [0017] of Abusleme et al. discloses the following:

The composition of the present invention is obtainable by closely mixing the ethylene thermoprocessable copolymers with tetrafluoroethylene (TFE) and/or chlorotrifluoroethylene (CTFE) modified with acrylic monomers, with one or more cross-linking agents. Alternatively, the composition of the present invention can be obtained uniformly distributing one or more crosslinking agents on a manufactured article of thermoprocessable copolymers of ethylene with tetrafluoroethylene (TFE) and/or chlorotrifluoroethylene (CTFE) modified with acrylic monomers, or by contacting the surfaces of said manufactured article with a hydrogenated polymer containing one or more crosslinking agents.

As such, Applicants respectfully maintain that a combination of the disclosures of Abusleme et al. and Stoeppelmann would result in a three-part multilayer of:

- (1) a fluoropolymer layer of E/CTFE with acrylic monomer (a) without a cross-linking agent;

- (2) an intermediate layer of a polyamide having an excess of -NH_2 end groups (e.g., “a NH_2 end group number (end group concentration) of 50 $\mu\text{Eq/g}$ ” (Stoeppelmann, column 4, lines 1-14)) and admixed with a diamine (see, e.g., Stoeppelmann, column 4, lines 19-23, teaching away from an excess of amino end groups without any diamine if adhesion is desired); and
- (3) a hydrogenated layer of a polyamide admixed with a diamine.

Applicants respectfully submit that present independent claim 1 may be clearly distinguished from the above combination of the disclosures of Abusleme et al. and Stoeppelmann, as present claim 1 discloses layer (B) as “consisting of polyamides having an amount of -NH_2 end groups in the range of 40-300 $\mu\text{eq/g}$ and optionally containing additives selected from fillers, lubricants, pigments, fire retardants, plasticizers, and thermal and UV stabilizers” (emphasis added). No diamines are disclosed in layer (B) of present claim 1. Dependent claims 2-3, 7-9, 11-15, and 17 are patentable for at least the same reasons as claim 1.

Present independent claims 6 (and present independent claim 18) may also be clearly distinguished from such a combination of the cited references, as neither Abusleme et al. nor Stoeppelmann teach or suggest a multilayer manufactured article having a layer A) “formed by a blend of thermoprocessable copolymers of ethylene with chlorotrifluoroethylene, and/or tetrafluoroethylene, and with acrylic monomers of formula: $\text{CH}_2=\text{CH-CO-O-R}_2$ (a) ... with the same copolymers without the acrylic monomers, provided that the blend contains an amount of acrylic monomer (a) in the range 0.01% -15% by moles with respect to the total sum of the monomers of ethylene

and of CTFE and/or TFE of the blend” and a layer B) “based on polyamides having an amount of -NH₂ end groups lower than 40 µeq/g, blended with ... one or more diamines” (present claims 6 and 18) (emphasis added). Dependent claims 7 and 16 are patentable for at least the same reasons as claim 6.

Applicants respectfully maintain that the “adhesion ... between the layers of A) and B)” in independent claims 1 and 6 is unexpected. For example, with regards to claim 6 in particular, Applicants have demonstrated in Example 10 comparative in the present specification that a layer A) formed by ECTFE alone, without any acrylic monomer (a) as in claim 6, does not adhere to a “polyamides having an amount of -NH₂ end groups lower than 40 µeq/g” (present claim 6), even if the polyamide is administered with a diamine. Further, neither of the cited references disclose an “adhesion higher than 10 N/mm” between the layers of A) and B) as in the multilayers of present claim 6. In contrast, Example 6 of Abusleme et al. discloses a “peeling force between the two layers of polymer A [E/CTFE/n-BuA] and polymer D’ [polyamide 12 with crosslinking agent TAIC] is about 1 N/mm” (Abusleme et al., Example 6, paragraph [0058]) (emphasis added), and Example 7 of Abusleme et al. discloses “polymer A’ [E/CTFE/n-BuA with crosslinking agent TAIC] and polymer D [polyamide 12]” with a “peeling force ... analogous to the previous Example [6]” (Abusleme et al., Example 7, paragraph [0059]). As such, the high level of adhesion of present claim 6 would have been unexpected to those of skill in the art in view of the cited references.

As neither Abusleme et al. nor Stoeppelmann et al., alone or in combination, teach or suggest multilayer manufactured articles with the particular layers of the presently

claimed invention, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-3, 6-9, and 11-17 under 35 U.S.C. § 103(a) over Abusleme et al. in view of Stoeppelmann.

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Abusleme et al. in view of Stoeppelmann as applied to claim 1, and further in view of Krause et al. (U.S. patent No. 5,958,532). This rejection is traversed.

Applicants respectfully maintain that Krause et al. does not satisfy the deficiencies of Abusleme et al. and Stoeppelmann. Please see the above discussion distinguishing Abusleme et al. and Stoeppelmann from present claim 1. As such, Applicants respectfully submit that dependent claim 10 is patentable for at least the same reasons as independent claim 1.


As Abusleme et al., Stoeppelmann, and Krause et al. do not teach or suggest all of the elements of claim 10, Applicants respectfully submit that those of skill in the art would not have found claim 10 obvious over the disclosure of the cited combination of references. Thus, for at least the above reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 10 under 35 U.S.C. § 103(a) over Abusleme et al. in view of Stoeppelmann as applied to claim 1, and further in view of Krause et al.

III. Conclusion

In view of the amendments and remarks above, Applicants respectfully submit that this application is in condition for allowance and request favorable action thereon. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event that this paper is not considered to be timely filed, an appropriate extension of time is requested. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account Number 01-2300, referencing Docket Number **108910-00057**.

Respectfully submitted,



Amy E.L. Schoenhard
Registration Number 46,512

Customer Number 004372
ARENT FOX PLLC
1050 Connecticut Avenue, NW, Suite 400
Washington, DC 20036-5339
Telephone: 202-857-6000
Fax: 202-857-6395

Enclosure: Petition for Extension of Time (one month)